Glasgow School of Art Programme Specification
Programme Title: MSc Visualisation (Medical Visualisation & Human Anatomy/ Heritage Visualisation/ Serious Games & Virtual Reality)

1. Programme Details:

Programme Title	MSc Visualisation with the following named awards: • Heritage Visualisation • Medical Visualisation & Human Anatomy • Serious Games and Virtual Reality
HECOS Code	• 100805 MSc Heritage Visualisation • 100264 MSc Medical Visualisation & Human Anatomy • 101268 MSc Serious Games and Virtual Reality
School	Simulation and Visualisation
Programme Leader	Dr. Daniel Livingstone
Minimum Duration of Study	12 months, registered study
Maximum Duration of Study	24 months, registered study
Mode of Study	Full-time and part-time
Award to be Conferred	1. MSc Heritage Visualisation 2. MSc Medical Visualisation & Human Anatomy 3. MSc Serious Games and Virtual Reality
Exit Awards	PG Cert: 60 Credits (Including Core Research Methods) 1. Heritage Visualisation 2. Medical Visualisation (for September intake, full-time), or Human Anatomy (for January intake, full time) or Medical Visualisation & Human Anatomy (part time) 3. Serious Games and Virtual Reality PG Dip: 120 Credits 1. Heritage Visualisation 2. Medical Visualisation & Human Anatomy 3. Serious Games and Virtual Reality Master of Science: 180 Credits 1. Heritage Visualisation 2. Medical Visualisation & Human Anatomy 3. Serious Games and Virtual Reality
SCQF Level:	11
Credits:	180

Academic Session	2020-21
Date of Approval	PACAAG April 2020 (updated UPC September 2020)

2. Awarding Institution	University of Glasgow
3. Teaching Institutions	The Glasgow School of Art / University of Glasgow
3.1 Campus	Glasgow
4. Lead School/Board of Studies	Simulation and Visualisation

5. Other Schools/Board of Studies	N/A
6. Programme Accredited By (PSRBs)	The Institution of Medical Illustrators (IMI) for MSc in Medical Visualisation and Human Anatomy

7. Entry Qualifications	
7.1 Highers	N/A
7.2 A Levels	N/A
7.3 Other	Bachelors Honours degree in a related discipline or equivalent professional practice. High calibre graduates from other disciplines may be considered if they are able to demonstrate an interest and ability in the field of visualisation.
7.4 English Language Requirements	All students will have to provide evidence of English language proficiency when applying. International Students Students who require a Tier 4 visa to study in the UK must meet one of the following requirements in order to gain entry: • IELTS for UKVI Academic with an overall score of 6.5 with a minimum of 6.0 in all components; • complete an acceptable Pre-sessional English Language Programme taught from within the UK with an outcome that equates to the IELTS scores as stated above. Students who have a degree from an English speaking country, or are a national of an English speaking country as listed in the UKVI Guidance, may use this as proof of English language ability.

8. Programme Scope:

SimVis is the largest postgraduate research centre of the GSA, with a complement of multidisciplinary Masters students, PhDs and an international multidisciplinary academic and research staff. Since its inception in 1997, it has experienced substantial growth. Within the school there are a wide range of virtual reality, extended reality and haptic facilities. SimVis also specialise in advanced 3D visualisation and interaction technologies, such as: 3D laser scanning, visualisation, 3D animation, 3D stereo displays, motion capture, gesture based interaction, advanced interfaces and ambisonic sound. The primary focus of research and development is centred on user interaction with real-time digital data involving multidisciplinary skill sets. SimVis has built an international reputation in 3D visualisation and interaction research supported by new tools, techniques and methodologies.

The Master of Science (MSc) in Visualisation programme provides an academic framework for postgraduate students to engage with the application of 3D visualisation, computer graphics and games technologies across a variety of fields and in widely differentiated social, scientific, medical, technological and industrial contexts. The MSc programme creates a unique opportunity to combine architecture and heritage / human anatomy/ serious games with state of the art digital technologies, including 3D laser scanning, digital reconstruction of historic sites, artefacts or human anatomy, interaction and visualisation using virtual reality facilities.

Students are asked to locate their developing professional and personal practice within a specialist pathway: Heritage Visualisation, Medical Visualisation & Human Anatomy, or Serious Games & Virtual Reality.

1. Heritage Visualisation

While the rate of deterioration and disappearance of heritage sites has accelerated due to acceleration of human activities, major technological breakthroughs have occurred to enable high quality digital documentation, i.e. 3D digital capture has been developed allowing the creation of a high definition, high accuracy, and high productivity digital record. This technology has been adopted worldwide and over 3,000 international service providers are available to deploy this technology to facilitate the preservation of heritage sites. In addition, major innovations in digital image processing, 3D modelling software, broadband access, and computer hardware capabilities have allowed worldwide public access to voluminous data and information systems including 3D visualisation.

Heritage Visualisation is a specialist pathway in the realm of 3D visualisation at SimVis. The MSc Heritage Visualisation aims to develop the knowledge and skill sets required to deliver and conduct digital documentation of world heritage sites and to create a unique opportunity to combine architecture and heritage with state of the art digital technologies, including 3D laser scanning, digital reconstruction of historic sites and artefacts, interaction and visualisation using virtual reality facilities. It allows an ideal opportunity for documentation, maintenance, and preservation of significant cultural sites and physical heritage assets, and to reconstruct them in a real-time 3D environment for use in tourism, art, education, entertainment and science.

This pathway enables students to understand the process of creating original 3D datasets of cultural objects and sites, to reconstruct and present immersive visualisation with interactive narratives, and provide a novel approach to foster multi-disciplinary study in computer science, history, geography, culture study, archaeology, architecture, the built environment, art and design, and tourist management, etc.

The MSc Heritage Visualisation has emerged as a result of successful strategic research collaborations between SimVis and a number of partners in cultural heritage. SimVis has various long-term partnerships with industry and governmental organisations and a world-leading portfolio of work, in the precise documentation and 3D representation of heritage objects, architecture and environments using state of the art, high resolution laser scanning technology and 3D visualisation software. The Heritage Visualisation teaching staff are able to draw on their experience working with heritage bodies in ensuring that the programme is not only academically rigorous, but is informed by current heritage practice.

The MSc Heritage Visualisation provides a higher level taught programme to those emerging from a wide range of disciplines. This places those graduates in a leading global competitive position to advance in research, academia, governmental and commercial organisations, gaining a greater understanding of techniques that may assist in digital heritage practices.

2. Medical Visualisation & Human Anatomy

The MSc Medical Visualisation & Human Anatomy is offered by SimVis at The Glasgow School of Art (GSA) in collaboration with the Anatomy Facility (AF), School of Life Sciences, University of Glasgow (GU).

It provides a unique opportunity to combine actual cadaveric dissection with 3D digital reconstruction, interaction and visualisation using state of the art virtual reality facilities. It allows students to examine human anatomy, and to reconstruct it in a real-time 3D environment for use in education, simulation, and training. This programme enables students to create original medical

datasets, allows a greater understanding of “normal” anatomy and regional variations, and provides a novel approach to aid multi-disciplinary fields in anatomical knowledge, understanding, training and skills transfer. With the demand from clinicians of anatomical knowledge of students increasing (as a result in changes to medical and dental curricula) this pathway provides an ideal opportunity for enhancement of research into human anatomy, diagnostics, simulation, and visualisation.

This pathway has emerged as a result of successful strategic research collaborations between SimVis, The University of Glasgow, Scottish Funding Council, Royal College of Surgeons and the Fulbright Commission. Of particular note is SimVis’ development of The Definitive Human (www.definitivehuman.com) which brings state of the art human anatomy software free to medical centres within Scotland. All these activities have fed back into the curriculum of the MSc Visualisation programme.

The MSc Medical Visualisation & Human Anatomy provides a higher level taught programme to those emerging from a wide range of medical, and related, disciplines that wish to develop knowledge and understanding in medical visualisation. This will place those graduates in a leading global competitive position to advance in medical research, academia, commercial organisations, gaining a greater understanding of techniques that may assist in communication with patients and/or clinical diagnosis.

This pathway attracts graduates in biomedical, dental, medical, surgical, and allied health professional programmes as well as those from other life-sciences, computer science, mathematics, physics, computer graphics and visualisation specialties, including employees from commercial organisations involved in designing, developing and marketing healthcare related products and simulations. In relation to the medical undergraduate programme revisions at GU, there is now a demand from clinicians from a wide variety of fields to be more aware of anatomical applications and imagery.

With the steadily increasing classroom use of multimedia resources, simulated immersive or augmented 3D interactive visualisation has been used to support dental, anatomical, surgical and other medical education due to its advantages on low cost, time efficiency, automated processes, ability to store performance history, and less medical related accidents. To develop these educational/training packages, a broad understanding of computer graphics, animation, video, sound, human-computer interface, visualisation technologies and biomedical data is required. This pathway will also result in developing and enhancing existing multidisciplinary medical expertise as well as individuals from different background of visualisation and simulation being involved in the design, development, and marketing medical educational tools, simulation suites, and other healthcare related products.

Other application areas include the development of novel systems for patient information, public engagement and educational applications aimed at a wider audience.

3. Serious Games and Virtual Reality

Digital games are firmly established as one of the most significant sectors of the entertainment and creative industries, and the technology behind today's games is being implemented in many other industries beyond entertainment. Serious games are games with purpose beyond just providing entertainment. Examples include, but are not limited to, edutainment and training, health games, and games for policy and social change. The serious games field is already a significant one and still has huge potential for growth, particularly in the realm of education.

Virtual Reality is likewise experiencing something of a renaissance in recent years, with a slew of new devices coming to market since 2013 (when the Oculus Rift DK1 was released). Virtual Reality is finding a new audience in the entertainment field, as well as with industrial and education sectors due to the rich immersion possible. Modern mobile phones and specialist devices have also led to an explosion in Augmented Reality devices and applications, which along with VR have created a rich ecology of 'Extended Reality' or XR applications.

The academic sector is now responding to the growing global demand for Masters programmes in this field. Based on our expertise in 3D modelling and animation, motion capture technology, research activities of key members of academic staff in serious games, and the market demand of serious games, we developed the Serious Games and Virtual Reality pathway for the MSc Visualisation programme. This was one of the first MSc programmes in the UK to specialise in Virtual Reality.

This pathway appeals to students from a wide range of disciplinary backgrounds ranging from computer science, digital media, through to education, art and animation and media studies. The programme will allow them to develop industry appropriate skills for the a range of career paths in games, media and digital content production, developing a unique portfolio of work and hands on experience.

The programme is delivered via a series of taught lectures, tutorials, set and elective projects, and self-directed learning. Students will be expected to engage in a high level of self-directed learning, research and independent critical reflection, as well as participating in the taught elements of the course of study.

9. Programme Structure:		
Heritage Visualisation		
Stage 1	**Credits**	**SCQF Level**
PCXS104 Academic Skills for Masters Research	20	11
PIHV105 Heritage Visualisation 1	40	11
Total	**60**	
Exit Award	**PG Cert**	
Stage 2		
PIHV212 Heritage Visualisation 2	40	11
GSA or SimVis Elective	20	11
Total	**60**	
Exit Award	**PG Dip**	
Stage 3		
PVIS301 MSc Research Project	60	11
Total	**60**	
Exit Award	**Masters**	
Medical Visualisation & Human Anatomy		
Students undertaking this programme split their time equally between the GU (AF) and the GSA (SimVis). The programme is delivered as two core areas – digital technologies applied to medical		

visualisation (delivered by the SimVis at Stage 1) and human anatomy (delivered by the AF at Stage 2).			
Stage 1	**Location**	**Credits**	**SCQF Level**
PCXS104 Academic Skills for Masters Research	GSA	20	11
PMVS105 Medical Visualisation	GSA	40	11
Total		**60**	
Exit Award		**PG Cert**	
Stage 2			
PMVS205 Introduction to Anatomy	GU	20	11
PMVS206 Structure and Function of the Human Body	GU	20	11
PMVS207 Cadaveric Dissection Techniques	GU	20	11
Total		**60**	
Exit Award		**PG Dip**	
Stage 3			
PVIS301 MSc Research Project		60	11
Total		**60**	
Exit Award		**Masters**	

Serious Games & Virtual Reality		
Stage 1	**Credits**	**SCQF Level**
PCXS104 Academic Skills for Masters Research	20	11
PSGV104 Serious Games Design and Implementation	40	11
Total	**60**	
Exit Award	**PG Cert**	
Stage 2		
PSGV201 Human Computer Interaction, Virtual & Augmented Reality	20	11
PSGV203 Game Development Project	20	11
GSA Elective	20	11
Total	**60**	
Exit Award	**PG Dip**	
Stage 3		
PVIS301 MSc Research Project	60	11
Total	**60**	
Exit Award	**Masters**	

9.1 Programme Structure – Exchange In/Exchange Out/Study Abroad:
N/A

10. What are the requirements for progressing from each stage?
A student will be permitted to progress to Stage 3 only if they have obtained a grade point average of C3(12.0) or above in the taught courses (Stage 1 & 2) with at least 75% of the credits at grade D3(9) or above and all credits at grade F3(6) or above.

11. Programme Aims:

The aims of the programme are:

- Develop students' awareness, knowledge and skills in 3D digital technology, and its applications in cultural heritage, medicine and healthcare, and serious games as appropriate to their chosen specialism
- Provide a practical introduction to commercial visualisation hardware and software, and use them to interactively explore, manipulate and understand 3D data captured from all types of sources
- Deploy the digital data acquisition, processing, archiving and presentation process as the synthesis of research, analysis, development and critique within the context of public, private and voluntary sectors while providing the context for scientific and technological change.
- Develop autonomous and self-directed exploration, individual expression and critical activity within an environment of professional and peer-critique.
- Encourage multi-disciplinary research in visualisation and related fields including computer science, history, culture study, archaeology, architecture, the build environment, art and design, tourist management, medical science, healthcare, and education, etc.
- Construct and apply research materials and methodology tailored to support a Masters project and its outcomes within an organisational context.
- Produce graduates capable of utilising key digital technologies to a professional level where their value to business, society and industry is made explicit.

11.1 Stage 1 Aims:

- Develop an understanding and knowledge of the key theories and techniques in 3D applications of digital technology in cultural heritage, medicine, healthcare, and other serious purposes beyond entertainment;
- Develop a comprehensive exploration of the relevant theoretical and practical issues involved in three-dimensional modelling and animation;
- Acquire knowledge of the principles and methods of 3D visualisation and apply these through the management of a small scale practical project;
- Acquire and develop an understanding of research methodologies.
- For Medical Visualisation & Human Anatomy, January start only: Generate through a research proposal a suitable project for Masters level, Stage 3, in relation to 3D visualisation as a research and technological practice.

11.2 Stage 2 Aims:

Note: While there is no formal progression requirement from Stage 1 to Stage 2, some of the Stage 2 aims on the Heritage and Serious Games pathways build upon those from Stage 1. Part-time students must have taken Stage 1 courses that are pre-requisites before taking any Stage 2 courses that build upon them.

The Medical Visualisation & Human Anatomy pathway Stages 1 and 2 are independent, and students do not need to have taken any Stage 1 (Medical Visualisation) courses before beginning Stage 2 (Human Anatomy).

The stage 2 aims are:

- Develop advanced skills and independent problem solving skills of theoretical and practical processes, and an understanding of the collaborative processes within practice of digital heritage, cadaveric dissection, or serious games & VR development;
- Use digital data acquisition hardware and software tools and related practices to explore, document and understand heritage objects, sites and context; (Heritage pathway)

- Detail key areas of clinically relevant anatomy, including regional anatomical variation and build detailed understanding of anatomical legislation and health and safety codes relating a laboratory dealing with human body donations; (Medical Visualisation & Human Anatomy pathway)
- Develop and submit a research proposal for a suitable dissertation project for Masters level, to be conducted in Stage 3.

11.3 Stage 3 Aims:

- Evidence a capacity for self-directed research and professional standards in a research project in the field of heritage/medical visualisation or serious games;
- Demonstrate, through a written report, critical and analytical reflection on the processes and research embodied in the research project.

12. Intended Learning Outcomes of Programme:

After full participation in and successful completion of the programme, students will be able to:

- Demonstrate a critical understanding of effective methods of visualising 3D data that supports heritage, virtual environments, and medical data, as appropriate to their chosen specialism
- Demonstrate practical skills involved using 3D digital technologies, e.g. data acquisition (2D and 3D), motion capture systems, commercial visualisation software, and Virtual Reality/user interfaces for visualisation applications in heritage, medicine and healthcare, and other domains.
- Critically review and analyse existing problems, sources and knowledge in a manner that allows informed judgement and critical appreciation across multiple disciplines.
- Communicate effectively with colleagues and professional bodies in a real-life context, using accepted terminology in related disciplines.
- Apply research techniques to an independent research project based on acquisition, processing, and presentation of 3D digital data.
- Plan and execute an individual research project that investigates themes within the field of 3D visualisation and related disciplines.

12.1 Intended Learning Outcomes of Stage 1

Knowledge and Understanding

- Demonstrate a critical knowledge and understanding of 3D modelling and animation techniques and concepts, in relation to the chosen specialism
- Demonstrate a critical knowledge and understanding of:
    - Digital documentation methodologies, applications and their appropriate use (Heritage Visualisation)
    - Volumetric and surface data, and appropriate techniques for visualisation (Medical Visualisation)
    - History and recent developments of serious games development and research (Serious Games & Virtual Reality)
- Develop a critical understanding of interactive 3D visualisation technologies and select appropriate methods to design and develop small-scale projects, in the context of the chosen specialism
- Display a critical understanding of relevant concepts, principles, research methods, methodologies and research ethics appropriate to their subject area

Applied Knowledge and Understanding

- Use a wide range of specialised software to support and enhance work in 3D visualisation
- Develop skills to enable independent learning of theoretical and practical processes.
- Use a range of specialised skills, techniques, and practices, for the design and development of heritage/medical visualisation or serious games.
- Completion of set practical projects that demonstrate an understanding of the 3D visualisation processes for the creation of 3D models and interactive applications for heritage, medical or games domains as appropriate to chosen specialism
- Design and develop a research proposal relevant to their studies / practice;
- Critically assess the strengths and weaknesses of relevant research methods;
- Identify and curate appropriate sources to inform research design and implementation;

Professional Practice: Communication, Presentation, Working with Others

- Communicate, through a relevant medium, how research can be applied in academic and/or professional contexts.
- Communicate to others the underlying theoretical and practical framework within which heritage/medical visualisation systems or serious games are built.
- Develop group working skills through the completion of practical projects.

12.2 Intended Learning Outcomes of Stage 2

Knowledge and Understanding

- Knowledge of key areas and techniques in cadaveric dissection, clinically relevant anatomy, heritage visualisation pipeline, or serious games development as appropriate for one of the specialisms of heritage visualisation, medical practice, serious games
- Demonstrate a significant range of core skills, techniques and practices associated with human anatomy and dissection techniques, heritage visualisation, or serious games design and development.
- Demonstrate an understanding of the functioning of health and safety applied to a laboratory dealing with human body donations, and application of anatomical legislation relevant to laboratory practice, including the Bequeathal process (Medical Visualisation & Human Anatomy)

Applied Knowledge and Understanding

- Completion of a group based small-scale practical project that demonstrates knowledge and understanding of human anatomy and cadaveric dissection, heritage visualisation, or serious games, as appropriate to chosen specialism:
    - Practical cadaveric dissection, or equivalent (Human Anatomy)
    - Game development project (Serious Games & Virtual Reality)
    - Heritage data acquisition and visualisation project (Heritage Visualisation)
- Recognise, understand and manage effectively different technical and theoretical approaches to the process of anatomical dissection, heritage visualisation, or serious games development.
- Pursue viable courses of action that demonstrate critical judgement through a practical project in relation to examples of heritage visualisation systems, human anatomy or serious games.
- Develop knowledge of research methodologies within the context and preparation of a research proposal in the area of heritage/medical visualisation or serious games.

Professional Practice: Communication, Presentation, Working with Others

- Further develop group working skills at a strategic level through the completion of practical group projects.

- Apply a range of standard and specialised instruments and techniques of anatomical dissection (medical visualisation & human anatomy)
- Present work to others in written report and presentation formats, demonstrating appropriate research and critical reflection skills

12.3 Intended Learning Outcomes of Stage 3

Knowledge and Understanding

- Plan and execute a significant individual research project that investigates themes within the field of heritage/medical visualisation, human anatomy, or serious games.
- Demonstrate critical engagement with the current knowledge base of 3D visualisation as applied to medical practices, cultural heritage, and serious games as appropriate to their chosen specialism,
- Demonstration of knowledge and understanding of research methods specific to their individual project of research;

Applied Knowledge and Understanding

- Apply acquired knowledge and understanding to complex issues systematically and creatively
- Combine complex processes in the production of a research project in relation to the chosen specialism
- Pursue a project to an appropriate professional standard with a rigorous academic reflection on the processes undertaken.
- Application and management of a research project in relation to 3D visualisation.
- Demonstrate a critical and analytical review of the theoretical processes and concepts employed during the development and production of a research project.

- Professional Practice: Communication, Presentation, Working with Others
- Demonstrate independence and self-direction through the development and management of a project of research
- Critically review and analyse existing problems, sources and knowledge in a manner that allows informed judgement and critical appreciation.
- Demonstrate high quality communication skills in tutorials and in project outcomes: in documents and applications in appropriate visual, verbal, and written formats
- Communicate to a specialist audience a critical and reflective knowledge of the 3D visualisation process through the execution of a Masters research project and an analytical and reflective Masters thesis.
- Demonstrate to others a critical knowledge of key visualisation processes used within the chosen specialism through the production of a Masters research project and thesis.

13. Learning and Teaching Approaches:

Students will be contacted in the pre-arrival period to access additional material about their programme.

Students will be expected to take significant responsibility for the management of their learning. Emphasis will be placed on developing and achieving self-reliance.

Courses and projects will be undertaken by directed and self-directed study, and will involve lectures, tutorials, workshops, practical sessions, guest lectures, and independent research.

Self-directed Learning and Research

In line with other taught postgraduate programmes at GSA, significant emphasis in the MSc Visualisation programme is placed on self-directed study, from project design and development, to gaining theoretical knowledge through traditional research methods. This is further developed by the focus upon pathway specialism, which emphasises autonomy, reflection upon personal learning and self-directed project work within a collaborative environment.

Lectures
Lectures and seminars are used to disseminate theoretical, contextual and historical knowledge and address specific issues underpinning practical work. Lectures also have the broad aim of generating further debate in seminars, tutorials or further enquiry in self-directed learning or research.

Tutorials, Workshops, and Practical sessions
The tutorial is designed to provide students with hands-on experience in lab sessions. These sessions usually follow lectures, and take place in computer and/or anatomy laboratories as practical classes. Lecturers/Demonstrators will be on-hand during the sessions to help students and answer their questions. The labs can be used by students at any time when SimVis is open.

Guest Speakers
Input from visiting lecturers and guest speakers will enable visualisation students access to, and understanding of, relevant contemporary practice, research and commercial contexts.

Assessment
Formative and summative assessment strategies are employed through the MSc Visualisation programme. Formative and summative assessment feedback operates to guide students in improving their work, including interpersonal skills, formal presentation abilities, and academic writing and research.

Dissertation Support & Arrangements
Dissertation projects are significant and challenging student-led projects, and the following arrangements are to ensure that students are provided appropriate support in adequately preparing and planning for their projects, and in completing them.

During stage 2 a range of support is provided to help students prepare research proposals for stage 3. A lecture on dissertation projects given mid-stage 2 will present dates, deadlines and administrative and practical guidance for the dissertation projects and proposals. Students are asked to submit draft proposals at approximately week 10-12 of stage (with a set deadline given at the earlier presentation) to allow initial feedback to be given by the end of stage 2. Additional talks on a range of relevant topics (ethics, referencing, etc.) are also offered by school and Learning & Teaching staff during stages 2 and 3.

Students may propose their own projects, or work from lists of projects suggested by tutors. Students are expected to meet with possible tutors obtain agreement from a tutor for project supervision. Project proposals are signed by both supervisor and student accordingly. Programme and Pathway leaders can assist in helping students find suitable supervisors.

In MVHA, all students are expected to obtain two supervisors – one from the University of Glasgow and one from SimVis. Again, Programme and Pathway leaders can assist in helping students find suitable supervisors.

During the dissertation itself, supervisory support is individual in nature, and adapts to the needs and demands of the student. Students are expected to meet regularly with supervisors over the dissertation period (typically for short meetings every other week). Practical support in technical aspects of project work is also available to students over stage 3, through a mix of scheduled support sessions and by-appointment with tutors.

14. Assessment Methods:

There will be three key summative assessment points in the academic year. Students may exit the programme with a Postgraduate Certificate after successfully completing 60 credits (including Core Research Methods), or a Postgraduate Diploma after successfully completing 120 credits. Interim awards will need to be surrendered if a student resumes their studies and successfully achieves a higher exit award.

The table below details the points in the programme where formal assessment is expected to take place (Full time).

Stage	Summative assessment points
Stage 1: PgCert	Weeks 13-15
Stage 2: PgDip	Weeks 28-30
Stage 3: MSc	Weeks 43-45

Students enrolled part time will be assessed at the end of each post-graduate term (with dates corresponding to the full-time stages) in each year, with final project submission in the summer of the second year.

The programme provides two forms of assessment, formative and summative. Formative assessment will take the form of seminars, tutorials, and so on, which provide the opportunity to refine and develop key principles in fields of enquiry, and to prepare for submission in the summative assessments, i.e. in assessed projects, coursework, presentations, written examinations, and in the final submission for the Research Project, or in the case of those exiting at Postgraduate Certificate or Postgraduate Diploma level, for the assessed projects, coursework, presentations, and written examinations. Each course will be examined against its specific Learning Outcomes as outlined in the course specification.

Engagement with formative assessment is a mandatory requirement.

The assessment of the Masters in Sound for the Moving Image will be regulated by the GSA Code of Assessment, and the GSA section of the Glasgow University Academic Calendar.

15. Relevant QAA Subject Benchmark Statements and Other External or Internal Reference Points:

The programme accords with the QAA statement regarding Masters level education available at the following link: https://www.qaa.ac.uk/docs/qaa/quality-code/master's-degree-characteristics-statement.pdf

Furthermore the programme is aligned with the Level 11 Descriptors provided by the SCQF governing attainment during Masters level study, available at:
https://www.sqa.org.uk/files_ccc/SCQF-LevelDescriptors.pdf

16. Additional Relevant Information:

Students on the Visualisation programme will be taught and supervised by staff with a mixture of commercial and research experience. Staff research interests have directly informed curriculum content, enhancing research-teaching linkages.

Notes on Part-Time Study
Part-time study is offered through a day-release mode, with part-time students taking the same classes at the same time as full time students. Part time study will generally require two days of attendance per week during the teaching period, and schedules will be provided in advance of each term to allow students to plan their time accordingly. Contact hours are supplemented through the use of online support through, e.g., virtual learning environments.
A part-time study guide will be prepared which will outline the amendments to programme delivery to enable part time study. Part time study availability is dependent on timetabling and ability to provide equivalent experience to full time students, and is not available for study in academic year 2020-21

Facilities
Access to studios and GSA facilities is generally limited to the regular opening hours, with extended hours available at key points of the year. The SimVis offers standard access hours year round. Reduced hours for access to workshops and library are in operation during the summer.

Exam Boards
Results from each course will be presented at the postgraduate exam board immediately following submission of summative assessment. Resits are to be normally completed before, and presented at, the next postgraduate exam board. (Postgraduate exam boards take place typically at the end of January, May and August each year, corresponding to the full-time study stages.)

Please refer to the GSA Code of Conduct and regulations published by the University of Glasgow Senate for Degrees, Diplomas and Certificates awarded in conjunction with The Glasgow School of Art.

Date of PACAAG Approval:	19 August 2020

Following approval by Board of Studies and PACAAG, the pro forma will be published with the Programme Specification as an addendum.